

### Abstract

Process for the preparation of tetrahydropterin and tetrahydropterin derivatives by hydrogenating pterin and pterin derivatives with hydrogen in the presence of a hydrogenating catalyst, in which the hydrogenation is carried out in a polar reaction medium and metal complexes that are soluble in the reaction medium are employed as the hydrogenation catalysts. The process is suited to the hydrogenation, particularly asymmetric hydrogenation, of folic acid, folic acid salts, folic acid esters, folic acid ester salts or dihydroforms thereof, with the proviso that in the event of using folic acid, carboxylic acid salts thereof or dihydroforms thereof the reaction medium is aqueous, and in the event of using folic acid esters, folic acid ester salts or dihydroforms thereof the reaction medium is an alcohol. The process opens up straightforward access to achiral and chiral pterin derivatives.